

**Work Order ID 96668****\*96668\***

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Wednesday, January 30, 2013 4:01:17 PM

Item ID: D3686-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: MONOPOD ASSEMBLY  
Start Date: 1/30/2013 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 1/30/2013 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference: DISSASSEMBLE

Approvals: Process Plan: *MF* Date: *13-1-30* Tooling: Date: Run Start **\*NR1\***  
QC: Date: SPC (Y/N): Date: Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3686	F								

150

0.00

**\*150\***

QC

Quality Control

Memo

0.00

PULL FROM STOCK D3686-041 X 1 B#93694

DISSASSEMBLE AND RETURN TO QC  
UNDER ORIGINAL BATCH NUMBER PER ECN 12-693  
\* (MEL WILL CREATE W/O'S TO REWORK PARTS)

DISCARD HARDWARE

*MF*  
*13-3-7*

# Work Order ID 96668

\*96668\*

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Item ID: D3686-041 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: MONOPOD ASSEMBLY  
 Start Date: 1/30/2013 Start Qty: 1.00 \*1\* Cust Item ID:  
 Required Date: 1/30/2013 Req'd Qty: 1.00 \*1\* Customer:  
 Reference: DISSASSEMBLE

Approvals: Process Plan: Date: Tooling: Date: Run Start \*NR1\*  
 QC: Date: SPC (Y/N): Date: Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
*160*									
Small Fab	Memo	0.00							
Small Fab	DISSASSEMBLE AND BRING BACK TO QC								
	D3688-7 X 1 B#81735								
	D3689-1 X 1 B#83358								
	D3691-1 X 1 B#81733								
	D3692-1 X 4 B#83257								
	D3692-3 X 4 B#81737								
	D3693-1 X 1 B#83612								
	D3693-3 X 1 B#81893								
	NA9509-12C x 1 B# 121586								
	NA9509-12C x 1 B# 121652								
	SCRAP HARDWARE								

170	QC21- Final Inspection - Work Order Release	0.00							
*170*									
QC	Memo	0.00							
Quality Control									

MCJ 13-03-08  
 CMF  
 13-3-7

# Picklist Print

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Work Order ID: 96668

Parent Item: D3686-041

Parent Item Name: MONOPOD ASSEMBLY

Start Date: 1/30/2013

Required Date: 1/30/2013

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A new issue 08-02-12 DD verified by:JLM  
 IPP Rev:B As per Rev B 09-01-07 JLM Verified By:EC  
 03-16 JLM VERIFIED BY:EC  
 IPP Rev:D Added sealant note as per Rev C 09-01-20 JLM  
 Verf:DD  
 revE DD verf:EC  
 IPP REV:C AS PER REV D 10-  
 IPP REV:E 11.12.05 as per dwg

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3686-041 MONOPOD ASSEMBLY		Manufactured	No				Each	0.0000		1 x 936194 MF 13-1-30			
D3688-7 STUD		Manufactured	No				Each	0.0000		-1 x 811735 MF 13-2-19			
D3689-1 SLEEVE		Manufactured	No				Each	18.0000		-1 1 x 83358 MF 13-2-19			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				FG		2							
				83358		2							
				GA		16							
				72117		1							
				88239		8							
				89987		7							
D3691-1 STUD		Manufactured	No				Each	0.0000		1 x -1 81733 MF 13-2-19			
D3692-1 SPACER		Manufactured	No				Each	427.0000		-4 - 4 x 83257			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				FG		5							
				80364		5							
				ST062		422							
				51467		16							
				80364		13							
				81729		106							
				81961		203							
				83257		24							
				85415		60							

MF  
13-2-19

# Picklist Print

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Work Order ID: 96668

Parent Item: D3686-041

Parent Item Name: MONOPOD ASSEMBLY

Start Date: 1/30/2013

Required Date: 1/30/2013

Start Qty: 1.00

Required Qty: 1.00

D3692-3 Manufactured No Each 25.0000  
SPACER

-4 81737 MF 13-2-19

Location	Loc Qty	Loc Code
ST062	25	
44690	1	
81737	24	

D3693-1 Manufactured No Each 2.0000  
Rod End Bearing

(x 83612 MF 13-2-19

Location	Loc Qty	Loc Code
FG	2	
81738	2	

D3693-3 Manufactured No Each 0.0000  
Rod End Bearing

-1 81893 x1 MF

NASS09-12C x - 1 121556  
NASS09L12C x - 1 121052  
} MF  
13-2-19

13-2-19

## List Lots

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Criteria : Item ID: d3686-041 All Locations All Warehouses All Quantity

Item ID	Warehouse ID	Lot Number	Last Trans Date	Lot Qty	Shelf Life Dt	Type Code	Comments
Item Name	Location ID				Lot Code		
D3686-041	Main Warehouse	93694	1/30/2013	1.0000			
MONOPOD ASSEMBLY	ST079						
Total:				1.0000			

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

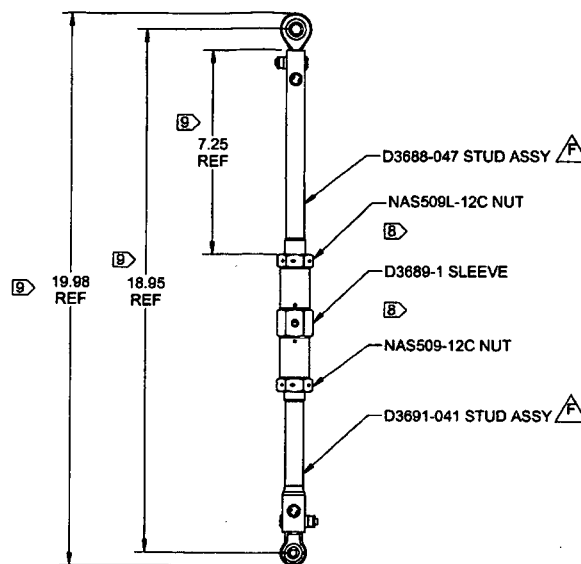
Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

**FAULT CATEGORY**

<b>Landing Gear</b>  <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b>  <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other
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ITEM	QTY -041	PART NUMBER	DESCRIPTION
1	X	D3688-041	MONOPOD ASSEMBLY
2	1	D3688-047	STUD ASSY
3	1	D3689-1	SLEEVE
4	1	D3691-041	STUD ASSY
5	1	NAS509L-12C	NUT
6	1	NAS509-12C	NUT



**D3686-041 MONOPOD ASSEMBLY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N D3686-041 PER DART QSI 044 6.1 ( FINE POINT PAINT MARKER )
- 7) WEIGHT: 2.82 lbs
- 8) USE TECTYL 502C CLASS I, MIL-PRF-16173E GRADE 2 OR EQUIVALENT ANTI-SEIZE COMPOUND ON THREAD.
- 9) DIMENSIONS SHOWN ARE WHEN D3688-047 & D3691-041 STUDS ARE FULLY THREADED INTO D3689-1 SLEEVES.

F	D3688-047 WAS D3688-7, D3691-041 WAS D3691-1 (ZN C3-1); RE-FORMAT NOTES SECTION AS PER QSI 043. REMOVE ASSEMBLY INSTRUCTIONS FROM NOTES (ZN A8-1). CHANGE BOM TABLE TO REFLECT NEW ASSEMBLY STRUCTURE (ZN D8-1). REF NCR 12-2074	DB	12.12.05
E	QTY(2) MS21250-03014 STEEL TENSION BOLTS AND QTY(2) MS21042-3 NUT REPLACE QTY(2) AN3C12A BOLTS AND QTY(2) MS21043-3 NUT (ZN B3-1 & C8/D6-1). REASON: PRODUCT IMPROVEMENT (REF. NCR11-784)	MB	11.11.23
D	19.98 WAS 20.10 (ZN C8-1); 18.95 WAS 19.07 (ZN C5-1)	RF	10.03.03
C	ROD END BEARINGS NOW ASSEMBLED USING SEALANT (ZN A8-1, B4-1)	RF	08.12.15
B	REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.05.22
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	MB	DRAWING NO.	REV. F
MFG. APPR.	JLM	<b>D3686</b>	SHEET 1 OF 1
APPROVED	MB	TITLE	SCALE
DE APPR.	MB	<b>MONOPOD ASSEMBLY</b>	NTS
DATE	12.12.05	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. USE IS LIMITED TO THE EXPRESS OR IMPLIED CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div> <input type="checkbox"/> Rework  <input type="checkbox"/> Scrap  <input type="checkbox"/> Use-as-is  <input type="checkbox"/> Work Order Update         </div> <div> <input type="checkbox"/> Skid-tube  <input type="checkbox"/> Machining  <input type="checkbox"/> Thermoforming  <input type="checkbox"/> Large Fab         </div> <div> <input type="checkbox"/> Crosstube  <input type="checkbox"/> Small Fab  <input type="checkbox"/> Finishing  <input type="checkbox"/> Composite         </div> <div> <input type="checkbox"/> Water Jet  <input type="checkbox"/> Prod. Eng. Coord.  <input type="checkbox"/> Rec/Store/Packaging  <input type="checkbox"/> Supplier         </div> <div> <input type="checkbox"/> Engineering  <input type="checkbox"/> Quality  <input type="checkbox"/> Other         </div> </div>	
--	--	--	--	--	--



Parent Item ID	Reason	Lot Qty	Lot Nbr	Lot Trans Date
AN3C10A	93694	-2	119798	12/10/2012 13:31
D3688-7	93694	-1	81735	12/10/2012 13:31
D3689-1	93694	-1	83358	12/10/2012 13:31
D3691-1	93694	-1	81733	12/10/2012 13:31
D3692-1	93694	-4	83257	12/10/2012 13:31
D3692-3	93694	-4	81737	12/10/2012 13:31
D3693-1	93694	-1	83612	12/10/2012 13:31
D3693-3	93694	-1	81893	12/10/2012 13:31
MS21042-3	93694	-2	123525	12/10/2012 13:31
MS21043-3	93694	-2	123525	12/10/2012 14:21
MS21250-03014	93694	-2	122497	12/10/2012 14:21
NAS509-12C	93694	-1	121556	12/10/2012 14:21
NAS509L12C	93694	-1	121652	12/10/2012 14:21

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other